Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1-90. (Cancelled)

91. (Original) A macroscopic carbon fiber comprising at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

92. (Original) The fiber of claim 91 comprising at least about 10^9 single-wall carbon nanotubes.

93. (Currently amended) A composite fiber comprising a plurality of ~~[~~ macroscopic carbon fibers, wherein the macroscopic carbon fibers comprises at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

94. (Previously presented) A molecular template array for growing continuous length carbon fiber comprising a segment of macroscopic carbon fiber, wherein the macroscopic carbon fiber comprises at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

95. (Original) The fiber of claim 91 having a length of at least 1 millimeter.

96. (Original) The fiber of claim 91 wherein a substantial portion of said nanotubes are of the (n,n) type.

97. (Original) The fiber of claim 91 wherein all of said nanotubes are not of the same type.

98. (Previously presented) A composite article of manufacture comprising a matrix material selected from the group consisting of metals, polymers, ceramics and cermets, said matrix comprising macroscopic carbon fibers, wherein the macroscopic carbon fibers comprises at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

99. (Cancelled)

100. (Previously presented) A high voltage power transmission cable wherein at least one conductor comprises a continuous carbon fiber, wherein

a) the continuous carbon fiber comprises at least about 10^6 single-wall carbon nanotubes in generally parallel orientation; and

b) a substantial portion of said nanotubes are of the (n,n) type.

101. (Original) The power transmission cable of claim 100 wherein both a central conductor and a coaxially disposed outer conductor are formed from said carbon fiber and an insulating layer is disposed therebetween.

102. (Original) The power transmission cable of claim 101 wherein said insulating layer is an air space.

103. (Original) The power transmission cable of claim 101 wherein said insulating layer comprises a material selected from the group consisting of insulating carbon fiber made from carbon nanotubes of the (m,n) type and insulating BN fiber made from hexaboronitride nanotubes or mixtures thereof.

104-162. (Cancelled)

163. (Previously presented) The fiber of claim 91 wherein the single-wall carbon nanotubes are arranged in a regular triangular lattice.

164. (Previously presented) The fiber of claim 91 wherein the fiber has a cross sectional dimension of at least one micron.

165. (Previously presented) The fiber of claim 91 wherein the fiber has a cross sectional dimension in the range between about one micron and about ten microns.

166. (Previously presented) The fiber of claim 91 wherein the fiber is at least one millimeter in length.

167. (Previously presented) The fiber of claim 91 further comprising a dopant intercalated between the single-wall carbon nanotubes.

168. (Previously presented) The fiber of claim 167 wherein the dopant comprises a substance selected from the group consisting of metals, halogens, $FeCl_3$ and combinations thereof.

169. (Previously presented) A spun thread comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

170. (Previously presented) A yarn comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

171. (Previously presented) A chemical filter comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

172. (Previously presented) A catalyst support comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

173. (Previously presented) A hydrogen storage material comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation and wherein the hydrogen storage material is capable of absorbing hydrogen.

174. (Previously presented) A pressure vessel for hydrogen storage comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

175. (Previously presented) A capacitor membrane comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

176. (Previously presented) An electromechanical device comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

177. (Previously presented) The electromechanical device of claim 176 wherein the device is a strain gauge.

178. (Previously presented) A power transmission cable comprising a plurality of macroscopic carbon fibers, wherein at least some of the plurality of the macroscopic carbon fibers comprise at least about 10^6 single-wall carbon nanotubes in generally parallel orientation.

179. (Previously presented) The cable of claim 178 wherein the cable is a coaxial cable.

180. (Previously presented) The cable of claim 178 wherein the cable comprises an outer conductor and an inner conductor and wherein at least one of the outer conductor and the inner conductor comprise a plurality of single-wall carbon nanotubes.

181. (Previously presented) The cable of claim 178 wherein the cable comprises at least two conducting elements and wherein the at last two conducting elements comprise a plurality of single-wall carbon nanotubes.

182. (Previously presented) The cable of claim 181 wherein the cable comprises alternating metallic carbon fiber conductors and insulating layers.